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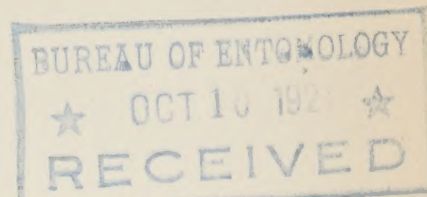
MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 89

September, 1921

## STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Entomologist in Charge



J. C. Bridwell, who left Washington last December for a study of the bruchid pests of the mesquite and closely related plants in Texas, returned from Brownsville to Washington during June with considerable parasitized material of Acanthoscelides uniformis and Acanthoscelides sallaei. Six hymenopterous parasites of these bruchids have been secured. Mr. Bridwell is at present preparing a report upon his work.

H. F. Willard, who has charge of the Honolulu office of the Federal Horticultural Board, is investigating the bruchid pests of the algaroba bean as his inspection duties permit. When he sailed from San Francisco, July 20, he carried with him several lots of pods of huisache (Vachellia farnesiana), secured by Bridwell, in which was breeding the huisache weevil (Acanthoscelides sallaei) and its parasites. Mr. Willard arrived in Honolulu July 27 and reported, on July 30, that the parasites Urosigalphus bruchi and Horismenus sp. were emerging in good numbers on his arrival at Honolulu, and that between July 27 and 30 he had secured over 300 specimens of Urosigalphus and 1,000 specimens of Horismenus sp. On July 30, 94 females and 113 males of U. bruchi were liberated and immediately began searching algaroba pods for bruchid larvae. On August 7, Mr. Willard reports having reared from the Texas material, besides the two species mentioned above, Glyptocolastes bruchivorus and Lariophagus texanus. The work in Honolulu is being done by Mr. Willard in cooperation with D. T. Fullaway, entomologist of the Hawaiian Board of Agriculture and Forestry.

Perez Simmons, who was transferred from the bean weevil investigations at Alhambra to Washington early in the year, has been assigned to an investigation of the ham skipper, Piophilha casei, and other insects affecting meats. This is in continuation of work started during the summer of 1920 under informal cooperation with the Bureau of Animal Industry.

R. T. Cotton was transferred from the Orlando, Fla., field station to Washington on July 1. He is continuing his research work with grain pests.

Miss Marion Van Horn, entomological laboratory assistant, has been transferred from Truck Crop Insect Investigations to this office.





"Red Cedar Chests as Protectors Against Moth Damage" is the title of an article recently submitted by E. A. Back and Frank Rabak, Chemical Biologist, of the Drug, Poisonous and Oil Plant Investigations of the Bureau of Plant Industry.

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#### BEE-CULTURE INVESTIGATIONS

E. F. Phillips, Apiculturist in Charge

J. B. Moorman, who was employed during the summer for a special survey to determine whether Tarsonemus woodi, the purported cause of Isle of Wight disease, is present in the United States, resigned September 1 to accept a position at Austin College, Sherman, Tex.

E. S. Prevost and N. I. Lyle, employed as extension specialists in South Carolina and Iowa respectively, resigned September 30. The extension work of the Bureau was discontinued on that date.

A. D. Shaftesbury resigned, effective September 30, to go to Johns Hopkins University to resume his graduate studies in zoology.

E. F. Phillips attended the summer field meeting of the Worcester County Massachusetts Beekeepers' Association at Paxton, September 3.

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#### CEREAL AND FORAGE INSECT INVESTIGATIONS

W. R. Walton, Entomologist in Charge

Philip Luginbill, in charge of the field laboratory at Columbia, S. C., recently visited Washington for the purpose of consultation and completion of manuscript on the fall army worm. Mr. Luginbill returns to Columbia October 3.

Stewart Lockwood, in charge of grasshopper investigations in the Northwestern States and located at Fargo, N. D., recently visited Washington for consultation. Mr. Lockwood returns to Fargo about October 1. He reports grasshopper conditions in North Dakota as very much improved.

Louis R. Schreiner, who was engaged as field assistant for the summer at Carlisle, Pa., laboratory, has resigned for the purpose of completing his studies.

Ernest E. Russell has been appointed field superintendent in insect control and is located at the United States Entomological Laboratory at Gainesville, Texas, for the purpose of studying the insects affecting cereal and forage crops in northern Texas. Mr. Russell was formerly connected with the office of the Arizona State entomologist.

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## FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Entomologist in Charge

C. A. Weigel has just returned from a trip to New Orleans, where he assisted the florists in fumigation operations against the camphor scale.

Dr. William Moore, associate professor of entomology, University of Minnesota, has been appointed as an agent in the Bureau and assigned to duty at Riverton, N. J., to take charge of insecticide investigations against the Japanese beetle. This work will be carried out in cooperation with the New Jersey and Pennsylvania State Departments of Agriculture.

Dr. Henry Fox, who has been assisting in Japanese beetle control operations, has returned to college to resume his teaching duties.

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## SOUTHERN FIELD-CROP INSECT INVESTIGATIONS

J. L. Webb, Entomologist Acting in Charge

Dr. W. D. Hunter, B. R. Coad, G. A. Maloney, a member of the boll weevil force, and F. S. Chamberlin, in charge of the tobacco insect laboratory at Quincy, Fla., visited Washington during the month.

G. L. Garrison, who has been on temporary field work at Quincy, Fla., has returned to Washington.

At the end of the month R. W. Wells left Herkimer, N. Y., for Dallas, Tex. During his absence from Herkimer, the ox warble work in New York will be carried on by H. M. Brundrett.

The following men have been temporarily transferred from the boll weevil force to the Federal Horticultural Board: L. R. Lyle, G. B. Ray, I. B. Rutledge, G. L. Smith, W. A. Stevenson, J. V. Vernon, and V. V. Williams.

The following temporary appointments have been terminated: W. R. Heard, J. B. Pope, and H. C. Young of the Tallulah, La., laboratory, and Chas. Milford of the Madison, Fla., laboratory.

F. D. Parnell and W. R. Smith of the boll weevil force have resigned.

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## TRUCK-CROP INSECT INVESTIGATIONS

F. H. Chittenden, Entomologist in Charge

The Mexican bean beetle caused larger losses than usual in the Estancia Valley in New Mexico. Reports by county agents and several growers show that







about 5,000 acres of beans were totally destroyed, and the amount of damage is conservatively placed at \$100,000. Reports by several of the growers and by Dr. Robert Middlebrook, entomologist of the State Agricultural College, College Station, N. Mex., indicate that the insect was held in check to some extent by dipterous parasites. An investigation of this report was made, but it was too late in the season to determine absolutely whether a parasite had been at work. As a general rule, the Mexican bean beetle, in its occurrence in New Mexico, confines its attacks to the edges of the large plantings that lie close to the hills. During the present year severe damage resulted in the middle of the Estancia Valley, many miles from the mountains, and the bean growers are fearful lest the insect will repeat its attacks other years. The bean harvest in the West was almost completed by September 10 and many of the beetles were in the fields, but none of them could be found in hibernation in the shrubbery in the foothills.

J. W. Hendry, inspector in sweet-potato weevil work at Macclenny, Fla., for the past three years, has resigned to engage in business at Jacksonville, Fla.

W. E. Stone, formerly agent with the Bureau of Entomology, has been appointed scientific assistant, and will be engaged in sweet-potato weevil eradication work.

L. M. Prichard, in charge of sweet-potato weevil eradication at the Gulfport station, has recently resigned to engage in farming.

L. W. Brannon, H. B. Lancaster, D. M. Dowdell, jr. and F. R. White, who have been temporarily employed in Mexican bean beetle investigations, have been appointed plant quarantine inspectors in connection with this project.

Sam H. Rountree, in charge of sweet-potato weevil eradication work at Macclenny, Fla., has been transferred to Brownsville, Fla., to take charge of a new eradication project, including about 30 infested farms at Lilly, Fla. This infested region comprises a new angle of the project, since sweet potatoes are grown continuously throughout the year and dug as needed. An opportunity will therefore be afforded to study the sweet-potato weevil under strictly tropical conditions.

C. H. Batchelder has concluded his investigation and experimental work against the insects affecting potato at Presque Isle, Maine, and is now preparing a report on the summer's operations against the potato flea-beetle, potato aphids and leafhoppers, and, in cooperation with the Bureau of Plant Industry, the transmission of the potato mosaic disease.

#### LIBRARY

Mabel Colcord, Librarian

#### New Books

Fernald, H. T., Applied entomology, an introductory text-book of insects in their relations to man. 286 p., illus. New York and London, McGraw-Hill Book Company, Inc., 1921.





- Froggatt, W. W., A descriptive catalogue of the scale insects ("Coccidae") of Australia. pt. 2. 159 p., illus. (New South Wales Dept. of Agr. Sci. Bul. 18) Sydney, June, 1921.
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- Mordvilko, A. K. Aphidodea, livr. 2. (Faune de la Russie Insectes hemipteres (Insecta Hemiptera) v. 1, livr. 2) Petrograd, 1919.
- Petch, T. The diseases and pests of the rubber tree. 278 p., 6 col. pl. London, Macmillan & Co., Ltd., 1921; Bibliography, p. 268-274.
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MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY  
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October, 1921

TRUCK-CROP INSECT INVESTIGATIONS

F. H. Chittenden, Entomologist in Charge

Prof. H. F. Wickham, special field agent in Mexican bean beetle investigations, returned, September 21, from a preliminary survey of the Mexican bean beetle in its native home, southern Mexico. Professor Wickham entered Mexico August 6, and proceeded to Mexico City, which was made the headquarters for the investigations undertaken. Many observations were made on the growing of beans in the lowlands and in the mountains extending as far as an altitude of 10,000 feet. A number of varieties of beans were secured for experimental purposes, and observations, with special reference to securing natural enemies and parasites, were begun. In the vicinity of Cuernavaca the bean beetle occurred abundantly on wild legumes and was a most important bean pest. Near Orizaba the few beans found in cultivation were badly damaged. The beetle was not found in the vicinity of Guadalajara in Jalisco, although its nonoccurrence is not explained. A single specimen of a dipterous parasite of the larvae hitherto unknown was collected. Some promising information was obtained which completely justifies a more extensive investigation during the coming summer.

J. E. Graf, entomologist in charge of field control, Mexican bean beetle, recently visited Washington (October 6 to 16) for the purpose of conference with regard to the Mexican bean beetle.

L. W. Brannon, D. M. Dowdell, jr., H. B. Lancaster, and F. R. White, temporary field assistants in Mexican bean beetle control, have accepted probationary appointments as plant quarantine inspectors with this office.

M. H. Atwood, F. I. Jeffrey, and E. G. Small, formerly temporary field assistants in Mexican bean beetle control, have accepted appointment as plant quarantine inspectors with the Federal Horticultural Board.

R. H. Turner and W. P. Whitlock, field assistants in Mexican bean beetle control, have resigned to return to college.

F. P. Bickley, engaged in Mexican bean beetle control, has been appointed scientific assistant pending certification.

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STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Entomologist in Charge

S. E. McClendon of Thomasville, Ga., recently spent several days in Washington, D. C.

Bernard Smit, who has had a temporary appointment as assistant in the bean weevil investigations at Alhambra, Calif., has returned to Cornell University.





to resume graduate study.

J. C. Bridwell when in New York recently made a study of the bruchid types of Schaeffer. He was fortunate in securing for study in Washington the entire collection of Bruchidae belonging to Mr. Schaeffer.

At the request of the Baltimore and Ohio Railroad Dr. E. A. Back has made several trips to Baltimore to cooperate with the company's chemist and elevator superintendent. Grain arriving at Baltimore this year is more heavily infested with insects than usual. Formerly the railroads at Baltimore have been paying private concerns  $3\frac{1}{2}$  cents a bushel for fumigating grain in cars and vessels. The railroads have determined to do this work for themselves at a charge to the grain owners of from  $1\frac{1}{2}$  to  $3\frac{3}{4}$  of a cent per bushel. With cars holding on an average about 1,500 bushels of wheat one can readily estimate the saving to shippers effected by this change of policy. At a charge of  $1\frac{1}{2}$  cent per bushel the saving to grain shippers is the difference between \$7.50 and \$52.50.

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#### FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Entomologist in Charge.

E. R. Van Leeuwen, who has been in charge of the bureau's life-history studies of the codling moth at Cornelia, Ga., has been transferred to New Orleans, La., where he will assist in connection with control operations against the camphor scale. The bureau's laboratory at Cornelia has been closed.

The arsenical spray residue work on pears carried out the past season by A. J. Ackerman at Sacramento, Calif., has been completed, and Mr. Ackerman has been transferred to Bentonville, Ark., to take charge of the Bureau's laboratory at that place in connection with apple insect investigations.

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#### LIBRARY

Mabel Colcord, Librarian

#### NEW BOOKS

Andrews, E. A., A note on the susceptibility of woods to borer attack, and on the value of rosir varnish as a protection. Indian tea association. Scientific department. Quarterly Journal 1921, pt. 2, p. 65-78, Calcutta, 1921.

Blaisdell, F. E., New species of Melyridae, Chrysomelidae and Tenebrionidae (Coleoptera) from the Pacific Coast, with notes on other species. 2pl., p. 137-231. Stanford University, Calif. Published by the University, 1921. (Stanford University pub. Univ. Ser. Biol. Sci., v. 1, no. 3.)



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Quebec Society for the protection of plants. Thirteenth annual report 1920-  
21. 79 p. Quebec, Proulex, King's printer, 1921.

Sorauer, Paul. Handbuch der pflanzenkrankheiten. Berlin, Verlagsbuchhandlung  
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MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 91

November, 1921

## TRUCK-CROP INSECT INVESTIGATIONS

F. H. Chittenden, Entomologist in Charge

C. E. Smith, Scientific Assistant, in charge of the Baton Rouge, La., station, reports under date of November 22 that an infestation of the sweet-potato weevil at Blanchard, Caddo Parish, La., has recently been discovered. This is a new infestation which has been definitely traced to slips grown at Longview, Tex., and is an excellent example of one of the most serious methods of dispersal of the sweet-potato weevil. Some growers in Texas, finding their crops unmarketable as vegetables through serious injury by the sweet-potato weevil, have developed the method of growing slips from the infested tubers and marketing their crops in this manner. The danger is obvious and every step should be taken to guard against this manner of distribution. Another infestation at Welsh, Jefferson Davis Parish, La., has been reported. This parish has not been previously known to be infested.

C. E. Smith reports that a fire in the experiment station buildings on November 2 destroyed the building in which he and T. H. Jones, Entomologist to the Louisiana Experimental Station, were quartered, together with all notes, photographs, specimens, and scientific libraries belonging to both. Practically nothing was saved from the flames. Their notes and specimens covered a period of several years' work with truck-crop insects, both in Louisiana and in other portions of the United States, and constitute an irreparable loss.

N. F. Howard, specialist in charge of research work, Mexican bean beetle investigations, reports that two inspectors working under his direction on the hibernation of the bean beetle in the vicinity of Birmingham, Ala., recently discovered large numbers of this pest hibernating together in a manner heretofore unconfirmed, but to be expected in view of the habits of other coccinellids. Whether any economic significance may be attached to this habit is a matter of speculation. It may, however, indicate a vulnerable point in the life history of the pest.

J. D. Waugh, formerly temporary field assistant in Mexican bean beetle control, has accepted appointment as plant quarantine inspector with the Federal Horticultural Board.

F. R. White, plant quarantine inspector, has been transferred from Mexican bean beetle investigations to sweet-potato weevil investigations and assigned to duty at Gulfport, Miss.

## FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Entomologist in Charge

A. D. Borden, who has been in charge of the Bureau's laboratory at Alhambra,





Calif., and engaged in citrus fruit insect investigations, has resigned from the Bureau to accept the position of entomologist and manager of a local insecticide company. The laboratory at Alhambra has therefore been closed.

John B. Gill, who has been in charge of the Bureau's laboratory at Brownwood, Tex., and engaged in pecan insect investigations has been transferred to Aberdeen, N. C., where careful investigations will be made of the plum curculio and other peach insects in that region.

A. I. Fabis will have charge of the pecan insect laboratory at Brownwood, Tex.

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#### SOUTHERN FIELD CROP INSECT INVESTIGATIONS

J. L. Webb, Entomologist Acting in Charge

Dr. W. D. Hunter accompanied by B. R. Coad and others made a trip to the Laguna District of Mexico during the latter part of October and the first part of November in connection with research work on the pink bollworm which is being carried on in that region. Following this trip Dr. Hunter visited Washington, D. C., later returning to his headquarters at Houston, Texas.

H. M. Brundrett, who has been engaged in ox-warble work at Herkimer, N. Y., stopped in Washington on his way to Dallas, Tex., where he is to work on this insect during the winter.

O. G. Babcock is on an extended trip through the Pacific Coast States investigating insects injurious to sheep and goats.

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#### BEE CULTURE

E. F. Phillips, Apiculturist in Charge.

George H. Rea has resigned, to take effect December 1, from the work as extension specialist in apiculture for New York to take a similar position with the State of Pennsylvania at Harrisburg. He is still retained as collaborator with the office of Bee-Culture Investigations.

Edward S. Prevost also resigned November 1 from the Bee-Culture staff but continues his teaching and extension work at Clemson College, South Carolina, under State appointment and as collaborator with the office of Bee-Culture Investigations.

E. F. Phillips left Washington on November 17 to conduct a series of short courses in bee-culture at Fort Collins and Grand Junction, Colo., and at Los Angeles and Berkeley, Calif. He will return December 22.





A. E. Lundie, entomologist from South Africa, is visiting this country and is, at present, doing some research work at the Bee-Culture Laboratory supplementing the work in beekeeping which he is carrying on at Cornell University.

Dr. L. O. Howard delivered the inaugural lecture of the season before the Royal Canadian Institute, Toronto, Ontario, on October 29. His subject was "Some Aspects of Economic Entomology."

LIBRARY  
Mabel Colcord, Librarian  
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- Platt, E. E. List of foodplants of some South African lepidopterous larvae. So. African Jour. Nat. Hist., v.3, no. 1, p. 65-138, June, 1921.
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- Tryon, Henry. Special cattle fatality in the Maranoa District, and its relation to the larvae of *Pterygophorus analis*, Costa. Queensland Agr. Jour., v.16, pt. 3, p. 208-216, pl. 45-46, Sept., 1921.
- Williams, C. B. Report on the froghopper-blight of sugar-cane in Trinidad. 170 p., illus., 11 pl. (Memoirs Dept. Agr. Trinidad & Tobago 1.) Trinidad, B. W. I., Jan., 1921. Bibliography, p. 163-170.











MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY  
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 92

December, 1921

## ELBERT S. TUCKER

With deep regret we announce the death of Elbert S. Tucker, cotton entomologist, at Tallulah, La., December 10, 1921. While Mr. Tucker had been in poor health for some time from a combination of causes, his sudden demise was totally unexpected. By his death the Department loses one of its most faithful and devoted employees.

Mr. Tucker received his scientific training at the University of Kansas under the tutelage of V. L. Kellog, F. H. Snow, and S. J. Hunter. For different periods of time he served appointments under the University of Kansas, the Texas Agricultural Experiment Station, the Louisiana Experiment Station, and the United States Department of Agriculture. During his life he was a prolific writer upon entomological subjects. His entire writings comprise a list of one hundred and eighteen papers published in various places. He was a charter member of the Entomological Society of America, and at the time of his death held membership in the Kansas Academy of Science and the American Association of Economic Entomologists. - J.L.W.

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TRUCK-CROP INSECT INVESTIGATIONS

F. H. Chittenden, Entomologist in Charge

C. P. Gillette, Director of the Colorado Experiment Station and a collaborator of this office, has recently furnished a map of all the known localities for the Mexican bean beetle in the State of Colorado for 1921. Forty-seven localities are shown grouped in five areas of infestation, the largest of which extends north from Denver to Fort Collins and Greeley; the second lies along the Arkansas Valley from Canon City to La Junta; and there are three areas on the western slope, consisting of a small one in the extreme southwest and two in Montrose and Delta Counties. It is somewhat remarkable that, with this exception, no information has been received as to the infestations along the Utah Border, as the general trend of drainage toward the west has probably carried numbers of beetles toward the Utah boundary. Information with regard to the Utah localities has as yet to be obtained.

N. F. Howard, specialist in charge of research work, Mexican bean beetle investigations, Birmingham, Ala., attended the meetings of the Association of Economic Entomologists at Toronto, Canada, where he





delivered a paper on the year's work against the Mexican bean beetle. On his return he visited the Japanese beetle laboratory at Riverton, N. J., for conference with Dr. William Moore as to insecticides. Several days were spent in Washington for consultation with Bureau authorities in regard to plans for the coming year.

B. L. Boyden, in charge of the sweet-potato weevil eradication in Florida, reports that to date every contractor on infested property in Baker County has been signed and it is expected that work will proceed along most satisfactory lines during the remainder of the season. About fifty per cent of the remaining infested properties have been shown as weevil-free at the final inspection for the year and substantial progress has accordingly been made. Arrangements have been completed with regard to the sweet-potato weevil quarantine in Georgia with M. V. Reed, acting entomologist of that State.

J. E. Graf, entomologist in charge of field control, Mexican bean beetle, visited Macclenny, Fla., for conference with Mr. Boyden in regard to sweet-potato weevil work for the coming year.

D. E. Fink, entomological assistant in charge of the truck-crop insect laboratory of the Bureau at Riverton, N. J., was present in Washington during the holidays for consultation in regard to his work on the strawberry leaf-roller and in regard to plans for next year.

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## LIBRARY

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### New Books

- Armbruster, Ludwig. Zum problem der bienenzelle; eine vergleichende instinkt-biologie des nestbaues bei bienen und wespen... 141 p., illus., plates. (Bucherei fur bienenkunde Bd. IV) Leipzig, 1920.
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- Deerr, Noel. Cane sugar. 664 p., illus., 29 plates. London, Norman Rodger, 1921. The pests and diseases of the cane, p. 139-174. Bibliography, p. 591-604. Historical conspectus, p. 605-610.
- Despeissis, A. The handbook of horticulture and viticulture of Western Australia. Ed. 3. 647 p., illus. Perth, F. W. Simpson, Gov't printer, 1921. Insect and fungoid pests, etc., p. 514-632.
- Ferris, G. F. Report upon a collection of Coccidae from Lower California. p. 61-132, illus. (Stanford Univ. Biol. Sci., v. 1, no. 2) Stanford University, Calif., Published by the University, 1921.
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- Gerstung, Ferdinand. Das problem des bienenzuchtbetriebes in fruhtracht gegenden. 32 p., illus. Berlin, Fritz Pfenningstorff, 1920.
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- Muttkowski, R. A. Copper, its occurrence and role in insects and other animals. Trans. Amer. Micros. Soc., v. 40, no. 3, p. 144-157, 1921. Bibliography, p. 157.
- Peryassu, Antonio G. Os Anophelineos do Brazil. Archivos do Museu nacional do Rio de Janeiro, v. 23, p. (5)-101, illus., table, pl. 40. 1921.
- Swain, A. F. A synopsis of the Aphididae of California... 221 p., 17 plates. (Univ. of Calif. pubs. Tech. Bul. Col. Agr. Agr. Expt. Sta. Entomology, v. 3, no. 1) Berkeley, Univ. of Calif. Press, Nov. 1, 1919.
- Wickson, E. J. The California fruits and how to grow them. Ed. 9, greatly revised. 508 p., illus., plates. San Francisco, Pacific Rural Press, 1921. Fruit protection, p. 468-486.
- Wollman, E. Le role des mouches dans le transport des germs pathogenes etudie par la methode des elevages aseptiques. Annales de l'Institut Pasteur, v. 35, no. 7, p. 431-449, 1921.



